## REMARKS

After entry of the foregoing amendment, claims 1-5, 8-12 and 16-21, 24, and 28-37 are pending in the application. Claims 33-37 are newly added.

The allowance of claims 1-5, 11, 16, 19, 28 and 29 is noted with appreciation.

The rejection of claim 8 is respectfully traversed. The claim requires a hidden reference signal, and the rejection applies Messing - stating *"The coordinate system of the captured low resolution image is a hidden reference signal."*

However, claim 8 specifies that "the *subject*" defines the hidden reference signal. That is, the reference signal is manifested in the subject. Thus, for example, it exists before an image thereof is captured. No such arrangement is taught or suggested by Messing.

New claim 33 depends from claim 8, and specifies that the subject comprises a printed article, where said print defines the hidden reference signal. (New claim 34 depends from claim 33, and additionally specifies that the article comprises printed artwork encoded with a digital watermark, where the hidden reference signal comprises the watermark.)

New claim 35 depends from independent claim 8, and adds a limitation removed from the independent claim.

Independent claim 21 has been amended to require decoding a signal steganographically encoded data in the first image frame, and decoding a signal steganographically encoded in the second image frame. Dependent claims 22, 23, 25, 26 and 27 have been canceled.

Dependent claim 24 has been amended to specify that the "determining" additionally includes correlating pattern data in the first and second frames.

New dependent claim 36 specifies that the "determining" of claim 24 makes use of signals steganographically encoded in the first and second image frames, and also makes use of correlating visible image content. New dependent claim 37 specifies that the visible image content in claim 36 comprises fiducial marks provided on a subject being imaged.

Independent claim 30 has been amended to require that the low resolution images be captured from a subject, "the subject having previously been deliberately marked with a marker signal to facilitate machine processing of images captured therefrom."

The rejection of claim 12 over Howell (6,570,613) is respectfully traversed. Howell is not understood to teach "means for determining which of said images align with each pixel position of a Bayer square to within a specified tolerance."

Prior to *Donaldson*, PTO practice was to interpret a "means plus function" element by giving it the broadest possible interpretation, i.e., as encompassing any means which performed the specified function – without regard to how it compared with the particular "means" disclosed in the specification.

After *Donaldson*, it is clear that such claim limitations are to be construed only to encompass the particular element(s) detailed in the specification, as well as elements that perform the identical function, in substantially the same way, to produce substantially the same result, as the elements detailed in the specification.

In the present case, the "means for determining" in Howell does not perform "in substantially the same way" as the "means for determining" detailed in applicants' specification. In particular, applicants' specification teaches that the means for determining image alignment proceeds by reference to information steganographically encoded in the subject from which the image is captured. Howell's arrangement doesn't perform in the same way, or in substantially the same way.

Applicants' specification also explains that other reference signals can be employed to determine alignment: a pseudo-random noise pattern with good correlation properties, fiducial marks, and correlating image content. Again, however, review of the passages cited in the Action do not indicate any equivalent counterparts in Howell's teaching.

The Action seems to have focused on identifying the same *function* in Howell, e.g., determining which images align with each pixel position of a Bayer square. However, the Action is silent regarding the elements employed by Howell to perform this function, as compared with those detailed by applicants.

In making a § 102 rejection of claim involving means-plus-function elements, it is the Office's burden to establish that the same, or equivalent, elements are taught in the prior art. Such burden has not been met. Accordingly, withdrawal of the rejection is solicited.

The rejections of claims 17 and 20 based on art including Tian are respectfully traversed. Tian is not believed to be applicable as a reference because it, and the present application, *"were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person."* (MPEP § 706.02(l)). The undersigned, by his signature below, attests to this fact.

Given the unavailability of Tian as a reference, applicants do not belabor this response with further points concerning the rejections, the claims, and the art.

In view of the foregoing, allowance of the pending claims is solicited.
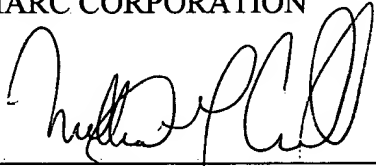
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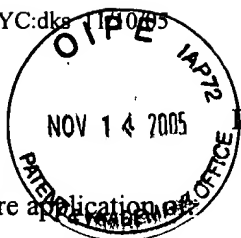
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Respectfully submitted,

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PATENT
Attorney's Matter No. Ewg-145

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Reed et al.

Application No.: 09/895,063

Filed: June 29, 2001

For:    GENERATING SUPER RESOLUTION
        DIGITAL IMAGES
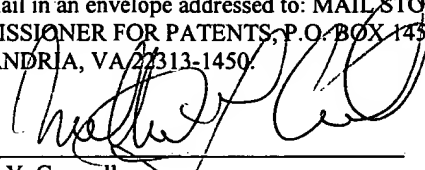
Examiner: P. Edwards

Date: November 10, 2005

**Response Under 37 CFR § 1.116**
**Expedited Procedure**

Art Unit  2621
Conf. No.:  2492

**CERTIFICATE OF MAILING**

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service on November 10, 2005, as First Class Mail in an envelope addressed to: MAIL STOP AF, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450.

_____

William Y. Conwell
Attorney for Applicant

## INFORMATION DISCLOSURE STATEMENT

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Applicants submit herewith information of which they are aware, and which they believe may be material to the examination of the application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. § 1.56. The information is listed on the attached Form PTO-1449 and copies are enclosed.

The submission of information on the attached Form PTO-1449 is not intended as an admission that any such information constitutes prior art against the claims of the application under examination. Applicants do not waive any right to take any appropriate action to antedate or otherwise remove any information from the attached Form PTO-1449.

No fee is required since this document is being submitted with a Request for Continued Examination.

If a fee is required, please charge to Deposit Account No. 50-1071 any fees that may be required for considering this Information Disclosure Statement under 37 C.F.R. § 1.17(p).

Date: November 10, 2005

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